

WHAT IS CLAIMED IS:

1. A device arrangement structure for hybrid construction equipment in which a hydraulic pump is driven with use of an engine and a generator motor in combination, and an inflow of discharge oil of said hydraulic pump to hydraulic actuators is controlled to drive at least one working machine,

wherein said hydraulic pump is connected to said engine via a first power take-off; and

wherein i) a regenerative motor which is driven by return oil from said hydraulic actuators and regenerates inertia energy or potential energy of said working machine to drive said hydraulic pump, ii) said generator motor, which is driven as a generator with surplus torque when regeneration torque of said regenerative motor is larger than driving torque of said hydraulic pump, and is driven as an electric motor to assist with drive of said hydraulic pump, are provided in parallel with said hydraulic pump via said first power take-off.

2. A device arrangement structure for hybrid construction equipment in which a hydraulic pump is driven with use of an engine and a generator motor in combination, and an inflow of discharge oil of said hydraulic pump to hydraulic actuators is controlled to drive at least one working machine, comprising:

devices of a high pressure hydraulic system including

i) said hydraulic pump connected to said engine via a first power take-off, ii) a hydraulic valve for controlling an inflow of discharge oil to said hydraulic actuators, iii) a regenerative motor which is connected to said hydraulic pump via said first
5 power take-off, driven by return oil from said hydraulic actuators, and regenerates inertia energy or potential energy of said working machine to drive said hydraulic pump, and iv) a working fluid tank for draining the return oil from said hydraulic actuators via said regenerative motor,

10 wherein devices of a charging system including a) said generator motor which is driven as a generator with surplus torque when regeneration torque of said regenerative motor is larger than driving torque of said hydraulic pump, and is driven as an electric motor to assist with drive of said hydraulic pump,
15 b) a capacitor device which is charged with generation electric power of said generator motor as the generator, and supplies driving electric power as the electric motor, and c) an inverter which controls charge of said generator motor into said capacitor device, and drive of said generator motor as the
20 electric motor, are placed separately from said devices of the high pressure hydraulic system.

3. The device arrangement structure for the hybrid construction equipment according to Claim 2,

25 wherein said inverter is placed at an upstream side of a

fan driven by said engine; and

wherein said generator motor is connected to said engine, at a side near to said inverter.

5 4. The device arrangement structure for the hybrid construction equipment according to Claim 2,

wherein said inverter is placed at an upstream side of a suction type fan driven by said engine; and

10 wherein said generator motor is connected to said engine via a second power take-off provided at said engine, at a side near to said fan.